

Shortened CV of Prof. Dr. Jan Nisar

1. Personal Record

Name:	Jan Nisar
Present Position:	Professor (BPS-21)
University/Institution	University of Peshawar
Department:	National Centre of Excellence in Physical Chemistry
Postal Address:	National Centre of Excellence in Physical Chemistry, University of Peshawar, Peshawar-25120, Pakistan
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2. HIGHER EDUCATION:

May 2007 **Ph.D. (Physical chemistry)** with specialization in Gas-Phase Kinetics "[Kinetics and mechanism of the gas-phase thermal dehydrohalogenation of some halogenated hydrocarbons](#)"

Supervisor: Dr. Iftikhar Ahmad Awan

National Centre of Excellence in Physical Chemistry, University of Peshawar, Pakistan.

Group: Chemical Kinetics

Projects: i) High temperature gas-phase kinetics studies of unimolecular reactions using static techniques and development of theoretical kinetics models based on ab-initio and RRKM formulation using ChemRate software.

ii) Kinetics of thermal decomposition of biomass and plastic wastes using pyrolysis gas-chromatography/mass spectrometry and thermogravimetry.

3. **M. Phil/Ph.D Theses supervised**

Scholar Name	Session	Status	Capacity	Title of research
Umar Nasir	2015-2016	Completed	First Supervisor	Catalytic pyrolysis of sugarcane bagasse: Isothermal and non-isothermal kinetics study
Abdur Rahman	2015-2016	Completed	First Supervisor	Pyrolysis study on plain and zinc oxide loaded almond shells into fuel surrogates: A kinetic study
Raqeeb Ullah	2019-2020	Completed	First Supervisor	Kinetics of the thermal decomposition of waste sesame biomass using Ni-Co/MCM-41 as catalyst
Nafees Ur Rehman	2019-2020	Completed	First Supervisor	Kinetics of the pyrolysis of pomegrante peels in the presence of sulfonated-derived tea waste-heterogeneous catalyst
Nouman Khan	2019-2020	Completed	First Supervisor	Kinetics of the thermo-catalytic decomposition of walnut shell biomass under isothermal and non-isothermal conditions
Ghulam Ali (Ph.D)	2015-2016	Completed	First Supervisor	Kinetics, thermodynamics and mechanism of thermal and thermo-catalytic pyrolysis of waste polystyrene into valuable products
M. Anas Khan (Ph.D)	2012-2013	Completed	First Supervisor	Kinetic study of thermo-catalytic decomposition of polypropylene under isothermal and non-isothermal conditions
Farmanullah Khan	2009-2010	Completed	First Supervisor	Removal of diclofenac from water using advanced oxidation techniques
M. Anas Khan	2010-2011	Completed	First Supervisor	A model study on the role of ionic surfactants on the solubilization of cyclohexenone compounds in aqueous media
M. Sufaid Khan	2011-2012	Completed	First Supervisor	Thermogravimetric studies of polystyrene, polyethylene and polyvinyl chloride using commercial mixed oxides as catalysts
Muddasir Iqbal	2011-2012	Completed	First Supervisor	Kinetics of thermal decomposition of levofloxacin under isothermal and non-isothermal conditions
Ghulam Ali	2013-2014	Completed	First Supervisor	Study of bottled mineral water for contamination of acetaldehyde using solid phase extraction and gas chromatography
Rameez Razaq	2013-2014	Completed	First Supervisor	Biodiesel production from jatropha oil using plain and various impregnated bone ash as catalysts
Mian Sharaf	2012-2013	Completed	First Supervisor	Kinetics of the thermo-catalytic degradation of grapefruit peels

				into biofuel
S. Sohaib Hassan	2014-2015	Completed	First Supervisor	Synthesis, characterization and photocatalytic applications of iron molybdate
Yousaf Khan	2016-2017	Completed	First Supervisor	kinetic study of the pyrolysis of polypropylene using clay as catalyst
Rabia Farid	2019-2020	Completed	First Supervisor	Kinetics of pyrolysis of polypropylene over cobalt oxide
Gul E Hina	2019-2020	Completed	First Supervisor	Kinetics of the conversion of polystyrene waste into fuel like hydrocarbons using nickel oxide as catalyst
Maria Aziz	2019-2020	Completed	First Supervisor	Kinetic study of thermal degradation of polypropylene using florisil as catalyst
Ali Ahmad	2019-2020	Completed	First Supervisor	Kinetics of thermal decomposition of peanut (<i>arachis hypogaea</i> l.) shells using termite mound as catalyst
Salman Waris	2019-2020	Completed	First Supervisor	pyrolysis behaviour of karanja (<i>pongamia pinnata</i> l.) seed press cake: evaluation of abandoned anthill as catalyst

4. **PUBLICATIONS:** 140 with Impact Factor 400+ and h-index 29 (citation 3000+ since 2017)

S/ No	Title	Full name of Journal	Year
1	Cobalt-doped molecular sieve for efficient degradation of polypropylene into fuel oil: Kinetics and fuel properties of the oil.	<i>Chemical Engineering Research and Design</i>	(2022): 177, 751-758.
2	Enhanced Bio-Oil Yield from Thermal Decomposition of Peanut Shells Using Termite Hill as the Catalyst	<i>Energies</i>	2022 , 15, 1891
3	Highly efficient visible light active doped ZnO photocatalysts for the treatment of wastewater contaminated with dyes and pathogens of emerging concern	<i>Nanomaterials</i>	2022 , 12 (3), 486
4	Supramolecular solvent-based microextraction for the preconcentration of Pb ²⁺ and Cd ²⁺ prior to spectrophotometric detection	<i>Turkish Journal of Chemistry</i>	(2022) 46: 147-156
5	Pyrolysis of juice-squeezed grapefruit waste: effect of nickel oxide on kinetics and bio-oil yield	<i>International journal of environmental science and technology</i>	2022 (version online)
6	Polymer microgels for stabilization of gold nanoparticles and their application in catalytic reduction of nitroarenes in aqueous medium	<i>RSC Advances</i>	2022 , 12, 5105-5117
7	Remediation of pesticides using TiO ₂ based photocatalytic strategies: A review	<i>Chemosphere</i>	2022 (version online)
8	Production of fuel oil and combustible gases from pyrolysis of polystyrene waste: Kinetics and thermodynamics interpretation	<i>Environmental Technology and Innovation</i>	2021 , 24, 101996
9	Pyrolysis of almond shells waste: effect of zinc oxide on kinetics and product distribution.	<i>Biomass Conversion and Biorefinery</i>	2021 (version online)
10	Kinetics of pyrolysis of sugarcane bagasse: effect of catalyst on activation energy and yield of pyrolysis products	<i>Cellulose</i>	2021 , 28, 7593–7607
11	Pyrolysis of waste tire rubber: a comparative kinetic study using different models	<i>Energy Sources A</i>	2021 (version online)
12	Optimised transesterification of used frying oils: production and characterisation of biodiesel	<i>International Journal of Environmental Analytical Chemistry</i>	2021 (version online)
13	Kinetic study of the pyrolysis of polypropylene over natural clay.	<i>Journal of Polymer Engineering</i>	2021 1;41(8):646-53.
14	Synthesis and Characterizations of PdNi Carbon Supported Nanomaterials: Studies of Electrocatalytic Activity for Oxygen Reduction in Alkaline Medium	<i>molecules</i>	2021 , 26, 3440
15	Poly(styrene@N-isopropylmethacrylamide-co-methacrylic acid)@Ag hybrid particles with excellent catalytic potential	<i>Journal of Molecular Liquids</i>	2021 , 335,116106
16	Simultaneous Femtomolar Detection of Paracetamol, Diclofenac, and Orphenadrine Using a Carbon Nanotube/Zinc Oxide Nanoparticle-Based Electrochemical Sensor	<i>ACS Applied Nano Materials</i>	2021 , 4, 5, 4699–4712

17	Highly selective, sensitive and simpler colorimetric sensor for Fe ²⁺ detection based on biosynthesized gold nanoparticles	<i>Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy</i>	2021 , 254,1196-45
18	Synthesis of Cu-doped MgO and its enhanced photocatalytic activity for the solar-driven degradation of Disperse Red F3BS with condition optimization	<i>Zeitschrift für Physikalische Chemie</i>	2021 (version online)
19	Eco-benign approach to produce biodiesel from neem oil using heterogeneous nano-catalysts and conditions optimization	<i>Environmental Technology & Innovation</i>	2021 (version online)
20	Nanocarriers for targeted drug delivery	<i>Journal of Drug Delivery Science and Technology</i>	2021 (version online)
21	Core/shell composite microparticles for catalytic reduction of p-nitrophenol: kinetic and thermodynamic study	<i>International Journal of Environmental Science and Technology,</i>	2021 (version online)
22	Catalytic degradation of malachite green using a crosslinked colloidal polymeric system loaded with silver nanoparticles,	<i>International Journal of Environmental Analytical Chemistry</i>	2021 (version online)
23	Thermodynamic and kinetic approach of biodiesel production from waste cooking oil using nano-catalysts	<i>Zeitschrift für Physikalische Chemie</i>	2021 (version online)
24	Enhanced electrochemical properties of silver-coated zirconia nanoparticles for supercapacitor application	<i>Journal of Taibah University for Science</i>	2021 , 15(2), 10-16
25	Bimetallic cobalt–iron diselenide nanorod modified glassy carbon electrode: an electrochemical sensing platform for the selective detection of isoniazid	<i>RSC Advances,</i>	2021 , 11, 12649-12657
26	Recyclable polymer microgel stabilized rhodium nanoparticles for reductive degradation of para-nitrophenol	<i>Zeitschrift für Physikalische Chemie</i>	2021 (version online)
27	Sensing Applications of Triazole Conjugated Silver Nanoparticles,	<i>Journal of Molecular Structure,</i>	(2021) : 1226, 129306.
28	Oxidative degradation of erythromycin using calcium carbonate under UV and solar light irradiation: Condition optimized by response surface methodology	<i>Journal of Water Process Engineering</i>	2021 1;44:102-433
29	Synthesis of Cu-doped MgO and its enhanced photocatalytic activity for the solar-driven degradation of disperse red F3BS with condition optimization	<i>Zeitschrift für Physikalische Chemie</i>	2021 , 235(11)1395-1412
30	Phenolic water toxins: redox mechanism and method of their detection in water and wastewater	<i>RSC Advances</i>	2021 , 11, 35783-35795
31	Fabrication of rGO/SrSeO ₄ nanocomposite as an electrode material with enhanced specific power for supercapacitor applications	<i>Journal of Taibah University for Science</i>	2021 , vol. 15:1, 357-366
32	Synthesis and characterization of a plant growth regulator based silver nanoparticles for the ultrasensitive detection of environmentally toxic Hg ²⁺ ions in tap water	<i>New Journal of Chemistry</i>	2021 , 45(38), 18039-18047
33	Electrochemical sensing platform for the simultaneous femtomolar detection of amlodipine and atorvastatin drugs	<i>RSC Advances</i>	2021 ;11(44):2713-5-51

34	Eco-benign biodiesel production from waste cooking oil using eggshell derived MM-CaO catalyst and condition optimization using RSM approach	<i>Arabian Journal of Chemistry</i>	2021 1;14(8):1 03263
35	Thermo-catalytic decomposition of polystyrene waste: Comparative analysis using different kinetic models	<i>Waste Management and Research</i>	2020 , 28(2), 202-212
36	Kinetics of the pyrolysis of cobalt impregnated sesame stalk biomass,	<i>Biomass Conversion and Biorefinery</i>	(2020) : 10, 1179 –1187
37	A method for determination of acetaldehyde in bottled waters and the effect of time and temperature on concentrations	<i>International Journal of Environmental Analytical Chemistry</i>	2020 , 1, 55-64
38	Hetero-structured Iron Molybdate Nanoparticles: Synthesis, Characterization and Photocatalytic Application	<i>International Journal of Chemical Reactor Engineering</i>	2020 , 18(2)
39	Decomposition kinetics of Levofloxacin: Drug-excipient interaction	<i>Zeitschrift für Physikalische Chemie</i>	2020 , 234.1: 117-128.
40	Pyrolysis of polystyrene waste for recovery of combustible hydrocarbons using copper oxide as catalyst	<i>Waste Management and Research</i>	2020 ,38(11), 1269- 1277
41	Detection of Copper Ions by a Simple, Greener and Cost Effective Sensor with GCE Modified with L-Tryptophan	<i>Journal of the Electrochemical Society</i>	2020 , 167, 027506.
42	Green synthesis, characterization and photocatalytic applications of silver nanoparticles using <i>Diospyros lotus</i>	<i>Green Processing and Synthesis</i>	2020 ; 9: 87–96.
43	Graphene oxide supported Fe ₂ (MoO ₄) ₃ nano rods assembled round-ball fabrication via hydrothermal route and photocatalytic degradation of nonsteroidal anti-inflammatory drug	<i>Journal of Molecular Liquids</i>	2020 , 301,1123 43.
44	Synthesis and characterization of Zn doped WO ₃ nanoparticles:photocatalytic, antifungal and antibacterial activities evaluation	<i>Materials Research Express</i>	2020 , 7, 015407.
45	Ranolazine-functionalized CuO NPs: efficient homogeneous and heterogeneous catalysts for reduction of 4-nitrophenol	<i>Turkish Journal of Chemistry</i>	2020 , 44, 168 – 179
46	Extraction of Lead through Functionalized Carbon Nanotubes and Estimation of the Measurement Uncertainty	<i>Analytical Letters</i>	2020 , 53.10: 1566- 1579.
47	Fabrication of a novel hybrid biocomposite based on amino-thiocarbamate derivative of alginate/carboxymethyl chitosan/TiO ₂ for Ni (II) recovery	<i>International Journal of Biological Macromolecules</i>	2020 ,152 , 380- 392.
48	FeVO ₄ nanoparticles synthesis, characterization and photocatalytic activity evaluation for the degradation of 2-chlorophenol,	<i>Desalination and Water Treatment</i>	187 (2020) 399–409
49	Native clay, MnFe ₂ O ₄ /clay composite and bio-composite efficiency for the removal of synthetic dye from synthetic solution: column versus batch adsorption studies,	<i>Desalination and Water Treatment,</i>	187 (2020) 219–231
50	Gamma and UV radiation induced degradation of methotrexate (anti-rheumatic drug) in aqueous solution and conditions optimization,	<i>Desalination and Water Treatment,</i>	191 (2020) 332–341

51	Kinetics and equilibrium studies of copper, zinc, and nickel ions adsorptive removal on to Archontophoenix alexandrae: conditions optimization by RSM	<i>Desalination and Water Treatment</i> ,	201 (2020) 289–300
52	Iron oxide (Fe ₂ O ₃) prepared via green route and adsorption efficiency evaluation for an anionic dye: kinetics, isotherms and thermodynamics studies	<i>Journal of Materials Research and Technology</i>	2020, 9(3), 4206- 4217
53	Facile synthesis of zero valent iron and photocatalytic application for the degradation of dyes,	<i>Materials Research Express</i> ,	2020, 7, 015802.
54	FeCoSe ₂ Nanoparticles Embedded in gC ₃ N ₄ : A Highly Active and Stable bifunctional electrocatalyst for overall water splitting.	<i>Scientific reports</i>	(2020): 10, 1-8
55	Detection of Copper Ions by a Simple, Greener and Cost Effective Sensor with GCE Modified with L-Tryptophan,	<i>Journal of the Electrochemical Society</i> ,	2020, 167, 027506
56	Marketability Prospects of Microbial Fuel Cells for Sustainable Energy Generation,	<i>Energy & Fuels</i> ,	2020, 34(8), 9108- 9136.
57	Development of tribenzamide functionalized electrochemical sensor for femtomolar level sensing of multiple inorganic water pollutants.	<i>Electrochimica Acta</i> ,	2020, 353, 136569
58	Tripeptide Derivative-Modified Glassy Carbon Electrode: A Novel Electrochemical Sensor for Sensitive and Selective Detection of Cd ²⁺ Ions.	<i>ACS Omega</i>	(2020) 5, 10123 1 0132
59	Cephradine-Capped Gold Nanoparticle Modified Glassy Carbon Electrode for Trace Level Sensing of Triphenyltin Hydroxide,	<i>Journal of the Electrochemical Society</i> ,	2020, 167, 137503
60	Photomineralization of untreated wastewater by a novel LaCeZr ₂ O ₇ -SnSe nanocomposite as a visible light driven heterogeneous photocatalyst.	<i>Solid State Sciences</i> ,	2020, 106, 106305
61	Synthesis and Characterization of Sulfanilamide-Based Nonionic Surfactants and Evaluation of Their Nano-Vesicular Drug Loading Application.	<i>Journal of Surfactants and Detergents</i> ,	2020, 23(5), 973-980
62			
63	Synthesis and biocompatibility of self-assembling multi-tailed resorcinarene-based supramolecular amphiphile.	<i>Colloid Polymer Science</i> ,	2020, 298, 331- 339
64	Gamma radiation and hydrogen peroxide based advanced oxidation process for the degradation of disperse dye in aqueous medium,	<i>Zeitschrift für Physikalische Chemie</i>	2020, 23 4(2), 279-294.
65	Synthesis of biocompatible triazole based non-ionic surfactant and its vesicular drug delivery investigation.	<i>Chemistry and Physics of Lipids</i>	(2020): 104894
66	Stabilization of silver nanoparticles in crosslinked polymer colloids through chelation for Catalytic degradation of p-nitroaniline in aqueous medium.	Chemical Physics Letters	(2020): 9:138263 .
67	Kinetics and equilibrium studies of copper, zinc, and nickel ions adsorptive removal on to Archontophoenix alexandrae: conditions optimization by RSM	<i>Desalination and Water Treatment</i>	(2020): 201 289– 300
68	Fuel production from waste polystyrene via pyrolysis: kinetics and products distribution,	<i>Waste Management</i> ,	2019, 88, 236-247.
69	Pyrolysis of expanded waste polystyrene: Influence of nickel-doped copper oxide on kinetics, thermodynamics and product distribution	<i>Energy & Fuels</i>	2019, 33, 12666- 12678.
70	Pyrolysis of polypropylene over zeolite mordenite ammonium: Kinetics and products distribution,	<i>Journal of Polymer Engineering</i>	2019, 39, 785-793.
71	Pyrolysis of polypropylene over LZ-Y52 molecular sieve: Kinetics and products distribution,	<i>Iranian Polymer Journal</i>	2019, 28, 839-847.

72	Pyrolysis of polystyrene: The influence of commercially available oxides as catalysts	<i>Journal of the Chemical Society of Pakistan</i>	2019 , 41, 779-787.
73	Calix[4]arene Derivative-Modified Glassy Carbon Electrode: A New Sensing Platform for Rapid, Simultaneous, and Picomolar Detection of Zn(II), Pb(II), As(III), and Hg(II)	<i>ACS Omega</i>	2019 , 4, 16860-16866.
74	Amino Acid-Fabricated Glassy Carbon Electrode for Efficient Simultaneous Sensing of Zinc(II), Cadmium(II), Copper(II), and Mercury(II) Ions,	<i>ACS Omega</i>	2019 , 4, 22057-22068
75	Amino acid functionalized glassy carbon electrode for the simultaneous detection of thallium and mercuric ions,	<i>Electrochimica Acta</i> ,	321 (2019) 134658.
76	Selective and simultaneous detection of Zn ²⁺ , Cd ²⁺ , Pb ²⁺ , Cu ²⁺ , Hg ²⁺ and Sr ²⁺ using surfactant modified electrochemical sensors,	<i>Electrochimica Acta</i> ,	323 (2019) 134592.
77	Single-Pot Synthesis of Biodiesel using Efficient Sulfonated-Derived Tea Waste-Heterogeneous Catalyst	<i>Materials</i>	2019 , 12, 2293.
78	Biogenic Silver Nanoparticles for Trace Colorimetric Sensing of Enzyme Disrupter Fungicide Vinclozolin	<i>Nanomaterials</i>	2019 , 9, 1604.
79	Wound healing potential of curcumin cross-linked chitosan/polyvinyl alcohol	<i>International Journal of Biological Macromolecules</i>	2019 , 140, 871-876.
80	Improved electrical, dielectric and magnetic properties of Al-Sm co-doped NiFe ₂ O ₄ spinel ferrites nanoparticles,	<i>Materials Science and Engineering B-Advanced Functional Solid-State Materials</i>	2019 , 243, 47-53.
81	Efficiency of immobilized Zea mays biomass for the adsorption of chromium from simulated media and tannery wastewater,	<i>Journal of Material Research and Technology</i> ,	2019 , 8(1), 75-86.
82	Development of a highly sensitive electrochemical sensing platform for the trace level detection of lead ions	<i>Journal of The Electrochemical Society</i> ,	2019 , 166 (9) B3136-B3142.
83	Ranolazine-Functionalized Copper Nanoparticles as a Colorimetric Sensor for Trace Level Detection of As ³⁺	<i>Nanomaterials</i> ,	2019 , 9, 83.
84	Enhancement of electrical and magnetic properties of cobalt ferrite nanoparticles by co-substitution of Li-Cd ions,	<i>Journal of Magnetism and Magnetic Materials</i> ,	2019 , 471, 236-241.
85	The utilization of leaf-based adsorbents for dyes removal: A review,	<i>Journal of Molecular Liquids</i> ,	2019 , 276, 728-747.
86	Graphene oxide decorated ZnWO ₄ architecture synthesis, characterization and photocatalytic activity evaluation,	<i>Journal of Molecular Liquids</i> ,	2019 , 285, 778-789

87	Adsorption efficiency of Pitpapra biomass under single and binary metal systems,	<i>Surfaces and Interfaces,</i>	2019 , 14, 138-145.
88	Comparative Study of Kinetics of the Thermal Decomposition of Polypropylene Using Different Methods	<i>Advances in Polymer Technology</i>	2018 , 37, 1168-1175.
89	Thermal decomposition study of polyvinyl chloride in the presence of commercially available oxides catalysts	<i>Advances in Polymer Technology</i>	2018 , 37, 2336-2343.
90	Pyrolysis of waste tire rubber: Influence of temperature on pyrolysates yield	<i>Journal of Environmental Chemical Engineering</i>	2018 , 6, 3469-3473.
91	Biodiesel production from waste cooking oil: An efficient technique to convert waste into biodiesel,	<i>Sustainable Cities and Society,</i>	2018 ,41, 220-226.
92	Thiamine-functionalized silver nanoparticles for the highly selective and sensitive colorimetric detection of Hg ²⁺ ions,	<i>New Journal of Chemistry,</i>	2018 , 42, 528.
93	Hydrothermal synthesis of molybdenum trioxide, characterization and photocatalytic activity, <i>Materials</i>	<i>Research Bulletin</i>	2018 ,100, 120–130.
94	Enhanced biodiesel production from Jatropha oil using calcined waste animal bones as catalyst	<i>Renewable Energy</i>	2017 , 101, 111-119.
95	Mutagenicity and cytotoxicity evaluation of photo-catalytically treated petroleum refinery wastewater using an array of bioassays,	<i>Chemosphere,</i>	2017 ,168, 590-598.
96	Monitoring of an Anti-Ulcer Drug Rabeprazole Using Au-Pt Bimetallic Alloy Nanoscale Electrochemical Sensor,	<i>Journal of The Electrochemical Society,</i>	2017 , 164 (6) H413-H419 H413.
97	Poly (phenazine 2,3-diimino(pyrrole-2-yl)) as Redox Stimulated Actuator Material for Selected Organic Dyes,	<i>Journal of The Electrochemical Society,</i>	2017 ,164 (14) B785-B791.
98	Measurement of cytotoxicity and heavy metal load in drains water receiving textile effluents and drinking water in vicinity of drains,	<i>Measurement,</i>	2017 , 109, 88-99.
99	Highly sensitive and selective electrochemical sensor for the trace level detection of mercury and cadmium,	<i>Electrochimica Acta,</i>	2017 , 258, 1397-1403.
100	Preconcentration of cadmium and manganese in biological samples based on a novel restricted access sorbents,	<i>Journal of Industrial and Engineering Chemistry,</i>	2017 , 48, 180-185.
101	Influence of Fe ²⁺ and Ni ²⁺ contents on the optical and electrical properties of ZnS quantum dots,	<i>Journal of Materials Science: Materials in Electronics,</i>	2017 , 28, 4449–4457.
102	Detoxification of photo-catalytically treated 2-chlorophenol: optimization through response surface methodology,	<i>Water Science and Technology,</i>	2017 , 76, 323-326.
103	Nickel adsorption onto polyurethane ethylene and vinyl	<i>Water Science and</i>	2017 , 76,

	acetate sorbents,	<i>Technology,</i>	219-235.
104	Degradation of Cytotoxic Agent in Soap and Detergent Wastewater by Advanced Oxidation Processes,	<i>Journal of the Chemical Society of Pakistan,</i>	2017 , 39(5), 706-717.
105	Comparison of He Ne laser and sinusoidal non-uniform magnetic field seed pre-sowing treatment effect on Glycine max (Var 90-I) germination, growth and yield,	<i>Journal of Photochemistry & Photobiology, B: Biology,</i>	2017 , 166, 212-219.
106	Mucilage characterization, biochemical and enzymatic activities of laser irradiated Lagenaria siceraria seedlings,	<i>Journal of Photochemistry & Photobiology, B: Biology,</i>	2017 , 173, 344–352.
107	Kinetics of the gas-phase thermal decomposition of 3-chloropropene	<i>Chemical Physics Letters</i>	2016 , 661, 200–205.
108	Pyrolysis–Gas Chromatography of Sugar Beet Bagasse	<i>Waste and Biomass Valorization</i>	2016 , 7:79–85.
109	Gamma – irradiation induced degradation of diclofenac in aqueous solution: Kinetics, role of reactive species and influence of natural water parameters	<i>Journal of Environmental Chemical Engineering</i>	2016 , 4, 2573–2584.
110	Efficient Photocatalytic Degradation of Norfloxacin in Aqueous Media by Hydrothermally Synthesized Immobilized TiO ₂ /Ti Films with Exposed {001} Facets	<i>The Journal of Physical Chemistry A,</i>	2016 , 120, 9916–9931.
111	VUV- Photocatalytic Degradation of Bezafibrate by Hydrothermally Synthesized Enhanced {001} Facets TiO ₂ / Ti Film	<i>The Journal of Physical Chemistry A,</i>	2016 , 120, 118–127.
112	Effect of Li–Cu doping on structural, electrical and magnetic properties of cobalt ferrite nanoparticles	<i>Ceramic International</i>	2016 , 42, 3666-3672.
113	Evaluation of electrical, dielectric and magnetic characteristics of Al-La doped nickel spinel ferrites	<i>RSC Advances,</i>	2016 , 6, 6589 – 6597.
114	Synthesis and electrochemical investigations of piperazines,	<i>Electrochimica Acta,</i>	2016 , 220, 705–711.
115	Biosorption of Pb(II) onto immobilized and native Mangifera indica waste biomass	<i>Journal of Industrial and Engineering Chemistry,</i>	2016 , 35, 185-194.
116	Synthesis, characterization and photocatalytic activity of ZnO flower and pseudo-sphere: Nonylphenol ethoxylate degradation under UV and solar irradiation	<i>Journal of Alloys and Compounds,</i>	2016 , 678, 126-136.
117	Pre-sowing seed magnetic field stimulation: A good option to enhance bitter gourd germination, seedling growth and yield characteristics,	<i>Biocatalysis and Agricultural Biotechnology,</i>	2016 , 5, 30-37.
118	Biocatalytic transesterification of Eruca sativa oil for the	<i>Biocatalysis and</i>	2016 , 5,

	production of biodiesel,	<i>Agricultural Biotechnology,</i>	162–167.
119	Physicochemical characterization, microbial decontamination and shelf life analysis of walnut (<i>Juglans regia</i> L) oil extracted from gamma radiation treated seeds,	<i>Biocatalysis and Agricultural Biotechnology,</i>	2016 , 6, 116-122.
120	Pre-sowing seed magnetic field treatment influence on germination, seedling growth and enzymatic activities of melon (<i>Cucumis melo</i> L.),	<i>Biocatalysis and Agricultural Biotechnology,</i>	2016 , 6,1 76-183.
121	Kinetics of the Uninhibited Reaction of 2-Chloropropene-Part II: Comparison with Inhibited Reaction	<i>Journal of the Chemical Society of Pakistan</i>	2015 , 37, 649-652.
122	Photo-degradation and optimisation modeling of reactive red 190 dye using a response surface methodology	<i>Oxidation Communications</i>	2015 , 38, 1667–1677
123	Cytotoxicity and mutagenicity evaluation of gamma radiation and hydrogen peroxide treated textile effluents using bioassays	<i>Journal of Environmental Chemical Engineering</i>	2015 , 3, 1912–1917
124	The Role of Ionic Surfactants on the Solubilization of Cyclohexenone Compounds in Aqueous Media	<i>Acta Chimica Slovenica</i>	2014 , 61, 681–687.
125	Catalytic thermal decomposition of polyethylene determined by thermogravimetric treatment	<i>Journal of the Chemical Society of Pakistan</i>	2014 , 36, 829-836
126	Kinetics of the gas-phase thermal decomposition of 3-bromopropene	<i>Kinetics and Catalysis</i>	2011 , 52, 487-492
127	Catalytic Thermal Decomposition of Polyethylene by Pyrolysis Gas Chromatography	<i>Journal of the Chilean Chemical Society</i>	2011 , 56, 653-655
128	Characterization of the products obtained in coal pyrolysis: A case study of some Pakistani coals	<i>Iranian Journal of Chemistry and Chemical Engineering</i>	2011 , 30, 53-56.
129	Conductance study of poly(ethylene oxide)- and poly(propylene oxide)-based polyelectrolytes	<i>Ionics</i>	2010 , 16, 539-542.
130	Influence of inherent minerals and pyrolysis temperature on the yield of pyrolysates of some Pakistani coals"	<i>Energy Conversion and Management</i>	2009 , 50, 1163-1171.
131	Effect of solid additives on pyrolysis behaviour of Makarwal coal	<i>Journal of the Chemical Society of Pakistan</i>	2009 , 31, 11-15.
132	Kinetics of the thermal isomerization of cis-methylcyclopropane carboxylic acid"	<i>Reaction Kinetics and Catalysis Letters</i>	2009 , 98, 375-381
133	Kinetics and mechanism of the gas-phase thermal	<i>Reaction Kinetics</i>	2008 ,

	decomposition of cis-2-methylcyclopropane methanol	<i>and Catalysis Letters</i>	95, 399-406
134	A Gas-Phase Kinetics study on the thermal decomposition of 2-chloropropene	<i>Kinetics and Catalysis</i>	2008 , 49, 461-465
135	Kinetics of thermal gas-phase decomposition of 2-bromopropene using static system	<i>International Journal of Chemical Kinetics</i>	2007 , 39, 1-5.
136	Analysis of Aliphatic and Aromatic Hydrocarbons Resulting from Pakistani Coals by Pyrolysis-Gas Chromatography	<i>Journal of the Chemical Society of Pakistan</i>	2007 , 29, 247-249
137	Kinetics study of dehydrohalogenation of 1-chlorohexane	<i>Journal of the Chemical Society of Pakistan</i>	2006 , 28, 417-420
138	Kinetics of the gas-phase thermal decomposition of methylcyclopropanecarboxylate using static method	<i>Journal of the Chemical Society of Pakistan</i>	2005 , 27, 144-147
139	Flash pyrolysis of Lakhra lignite utilizing effective radical transfer	<i>Journal of the Chinese Chemical Society</i>	2004 , 51, 291-296
140	Pyrolysis of metal ion exchanged coal	<i>Journal of the Chemical Society of Pakistan</i>	2003 , 25, 88-92

5. Ph.D defense committee member (Examiner)

S.No	Name of Ph.D Scholar	Institute	Public defense held on
1.	Abdul Samad	School of Chemistry University of the Punjab Lahore	24 March, 2022
2.	Ifftikhar ul Haq	School of Chemistry University of the Punjab Lahore	14 January, 2022
3.	Aneela Jameel	Department of Chemistry, GC University, Faisalabad	27 September, 2021
4.	Naila Zubair,	NCE Physical Chemistry, University of Peshawar	12 October, 2020
5.	Muhammad Gul,	NCE Physical Chemistry, University of Peshawar	12 February, 2021.
6.	Amir Muhammad,	Institute of Chemical Sciences, University of Peshawar	2 nd November, 2020
7.	Shahnaz Pir Muhammad	Institute of Chemical Sciences, University of Peshawar	11 September, 2020
8.	Muhammad Irfan	NCE Physical Chemistry, University of Peshawar	1 st July, 2021
9.	Fawad Ali	Institute of Chemical Sciences, University of Peshawar	29 July, 2019

6. **MISCELLANEOUS ADMINISTRATIVE EXPERIENCE**

S.No	Name of Committee/task	Role	Joining date	Ending date
1.	House building loan committee	Convener	2019	Till date
2.	Departmental promotion committee	Member	2013	2017
3.	Purchase committee	Member	2013	2017
4.	Research remuneration committee	Member	2017	2019

7. **Membership of academic committees, learned societies and other achievements in the Univ, Public or at International level.**

a. **Membership of Academic Committees**

S.No	Name of Committee/task	Role	Joining date	Ending date
1.	Advanced studies and research board subcommittee-1, University of Peshawar	Member	08-03-2020	07-03-2022
2.	Advanced studies and research board subcommittee-1, University of Peshawar	Co-Convener	08.03.2022	Till date
2.	Board of Faculty of Life and Environmental Sciences, University of Peshawar	Member	26-08-2021	Till date
3.	Academic Committee, NCE Physical Chemistry, University of Peshawar	Member	07-06-2021	Till date
4.	Board of Faculty of Chemical and Pharmaceutical Sciences, Kohat University of Science and Technology	Member	12-08-2021	Till date
5.	ORIC Research and Support Committee, Kohat University of Science and Technology	Member	13-09-2021	Till date
6.	Scrutiny and Quantification Committee, Kohat University of Science and Technology	Member	05-08-2021	Till date
7.	Member graduate studies committee Shaheed Benazeer Women University Peshawar	Member	01-09-2020	Till date
8.	Member selection Board for Assistant Professor (B-18) in Higher Education Department, Khyber Pakhtunkhwa Public Service Commission, Peshawar	Subject expert	3-4 March, 2021	4 March, 2021
9.	Member selection board for Associate Professor (B-20) in Faculty of Chemical and Pharmaceutical Sciences, Kohat University of Science and Technology	Subject expert	June 11, 2021	June 11, 2021

b. Membership of Learned Societies

Name of Society	Date of Joining	Ending date	Role	Major Activities of Society
Chemical Society of Pakistan	14/03/2011	28/07/2021	Associate Secretary, Khyber Pakhtunkhwa Chapter	Major activities are; Organizing National/International Events and publication of J.Chem.Soc. Pak.
Chemical Society of Pakistan	29/07/2021	Till date	Vice President, Khyber Pakhtunkhwa Chapter	Major activities are; Organizing National/International Events and publication of J.Chem.Soc. Pak.

c. International/National Conferences/Symposium Organized

Title	National/International	Role	Starting date	Ending date	Place
International Conference on Physical and Environmental Chemistry	International	Organizing Secretary	9 th September, 2013	11 th September, 2013	Nathiagali, Abbottabad
11 th International & 23 rd National Chemistry Conference	International	Organizing Secretary	15 December 2012	17 December 2012	NCEPC, University of Peshawar
National Symposium on Kinetics and Catalysis	National	Organizing Secretary	26 September 2011	28 September 2011	Baragali Summer campus University of Peshawar
First National Conference on Physical and Environmental Chemistry	National	Organizing Secretary	26 September 2010	30 September 2010	Baragali Summer campus University of Peshawar

d. International Conferences/Symposium/Workshops/Seminars attended Abroad

Title	National/International	Role	Starting date	Ending date	Place
13 th International Seminar on Polymer Science and Technology	International	Oral presentation	November 19, 2018	November 22, 2018	Tehran, Iran
International Workshop on Determination of physical and mechanical properties of polymers	International	Participant	19 November 2018	19 November 2018	Tehran, Iran
Eurasia Waste Management Symposium	International	Oral presentation	2 May, 2018	4 May, 2018	Istanbul, Turkey
SQU–chemistry conference: Green and Sustainable Chemistry	International	Invited lecture	13 November, 2017	15 November, 2017	Muscat, Oman
Kathmandu Symposium on advanced Materials	International	Invited lecture	17 October, 2016	20 October, 2016	Pokhara, Nepal
International workshop on research trends in synthesis, characterization and applications of new materials	International	Plenary lecture	24 October, 2016	24 October, 2016	Biratnagar, Nepal
Eurasia Waste Management Symposium	International	Oral presentation	2 May, 2016	4 May, 2016	Istanbul, Turkey
Eurasia Waste Management Symposium	International	Oral presentation	28 April, 2014	30 April, 2014	Istanbul, Turkey
11 th international Conference on Chemistry and Its Role in Development,	International	Oral presentation	11 March, 2013	15 March, 2013	Sharm- El-Sheikh, Egypt
Bangladesh Chemical Congress	International	Oral presentation	7 Dec, 2012	9 Dec, 2012	Dhaka, Bangladesh
Eurasia Waste Management Symposium	International	Oral presentation	14 November, 2011	16 November, 2011	Istanbul, Turkey
11th Eurasia Conference on Chemical Sciences	International	Oral presentation	6 October, 2010,	10 October, 2010,	The Dead Sea – Jordan
International Workshop on Conservation and Restoration of Manuscripts	International	Trainee	3 July, 1993	29 July, 1993	Damascus, Syria

e. International/National Conferences/Symposium attended in Pakistan

Title	National/International	Role	Starting date	Ending date	Place
International Symposium on Green Chemistry and Sustainable Developments	International	Invited speaker	April 01, 2022	April 01, 2022	University of Sargodha
30 th National & 18 th International Chemistry Conference on Recent Trends in Chemistry,	International	Invited speaker	November 27, 2019	November 29, 2019	University of Management and Technology, Lahore
International Symposium on Technologies and Materials for Renewable Energy, Environment and Sustainability	International	Keynote speaker	February 6, 2019	February 7, 2019	University of Agriculture, Faisalabad
2 nd International conference of Biochemistry, Biotechnology and Biomaterials	International	Oral presentation	December 9, 2018	December 11, 2018,	University of Agriculture, Faisalabad
2 nd International conference on Environment & Sustainable Development,	International	Oral presentation	13 March, 2018	14 March, 2018	Govt. College University, Lahore
16 th International & 28 th National Chemistry Conference,	International	Oral presentation	20 November, 2017	22 November, 2017	Federal Urdu University for Arts, Science and Technology, Karachi
2 nd National Conference on Drug Development, Natural and Synthetic	National	Oral presentation	August 23, 2015	August 23, 2015	COMSATS University, Abbottabad Campus
14 th International & 26 th National Chemistry Conference	International	Oral presentation	October 5, 2015	October 8, 2015	The Islamia University of Bahawalpur, Bahawalpur
13 th International & 25 th National Chemistry Conference,	International	Oral presentation	October 20, 2014	October 22, 2014	Institute of Chemistry, University of Punjab, Lahore
10 th International Symposium on Analytical & Environmental	International	Oral presentation	December 2, 2013	December 4, 2013	University of Sind, Jamshoro

Chemistry, 12 th International & 24 th National Chemistry Conference	International	Oral presentation	October 28, 2013,	October 30, 2013,	Bahauddin Zakariya University, Multan
9 th International and 21 st National Chemistry Conference	International	Oral presentation	March 14, 2011	March 16, 2011,	University of Karachi

8. HONOURS/ AWARDS

a. Major Research Project awarded/completed

Title	Role	Starting date	Ending date	Awarded by	Amount
Kinetics of the gas-phase thermal decomposition of haloalkanes	Principal Investigator	15/04/2010	06/10/2016	Higher Education Commission Pakistan	5788590

b. Research Productivity Awards

Award type	Year	Awarded by
Research Productivity Award	2010-2011	Pakistan Council for Science & Technology
Research Productivity Award	2012	Pakistan Council for Science & Technology

c. Travel Grants awarded

Travel grant for	Title	Role	Place	Starting date	Ending date	Awarded by
Seminar	13 th International Seminar on Polymer Science and Technology	Oral presentation	Tehran, Iran	19 Nov, 2018	22 Nov, 2018	HEC
Workshop	Determination of physical and mechanical properties of polymers	Participant	Tehran, Iran	19 Nov, 2018	19 Nov, 2018	HEC
Symposium	Eurasia Waste Management Symposium	Oral presentation	Istanbul, Turkey	2 May, 2018	4 May, 2018	ECO-SF
conference	SQU–chemistry conference: Green and Sustainable Chemistry	Invited lecture	Muscat, Oman	13 November, 2017	15 November, 2017	conference organizers
Symposium	Kathmandu Symposium on advanced Materials	Invited lecture	Pokhara, Nepal	17 October, 2016	20 October, 2016	HEC
Workshop	International workshop on research trends in synthesis, characterization and applications of new materials	Plenary lecture	Biratnagar, Nepal	24 October, 2016	24 October, 2016	Workshop organizers
Symposium	Eurasia Waste	Oral	Istanbul,	2 May,	4 May,	HEC

	Management Symposium	presentation	Turkey	2016	2016	
Symposium	Eurasia Waste Management Symposium	Oral presentation	Istanbul, Turkey	28 April, 2014	30 April, 2014	HEC
Conference	11 th international Conference on Chemistry and Its Role in Development	Oral presentation	Sharm- El-Sheikh, Egypt	11, March, 2013	15, March, 2013	HEC
Congress	Bangladesh Chemical Congress	Oral presentation	Dhaka, Bangladesh	7 Dec, 2012	9 Dec, 2012	PSF
Symposium	Eurasia Waste Management Symposium	Oral presentation	Istanbul, Turkey	14 November, 2011	16 November, 2011	HEC
Conference	11th Eurasia Conference on Chemical Sciences	Oral presentation	The Dead Sea – Jordan	6 October, 2010	10 October,	HEC